Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING – SEMESTER – V-EXAMINATION – WINTER 2015

Subject Code: 372303 **Date: 08/12/2015**

Subject Name: High Performance and Green Plastics

Time: 10:30 AM TO 1:00 PM **Total Marks: 70**

Instructions:

1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Each question carry equal marks (14 marks)**

Q.1	(a)	Write specific properties and applications of poly (amide-imide).	**07**
	(b)	What do you mean by high temperature polymers? State applications of it.	**07**
Q.2	(a)	Define: Polymer alloys, Polymer blends, biodegradable polymers, compatibilization, barrier properties, Miscible blend, Immiscible blend.	**07**
	(b)	Define photoconductivity. State properties and applications of photoconductive polymers.	**07**
		OR	
	(b)	Write short note on thermoplastic elastomers.	**07**
Q.3	(a)	What are the basic requirements for polymer blend preparation?	**07**
	(b)	With suitable example explain the procedure for selecting polymer blend components.	**07**
		OR	
Q.3	(a)	State various methods of blend preparation and explain any one.	**07**
	(b)	Why ABS-PC blend is suitable for mobile body? State characteristics and applications of ABS-PC.	**07**
Q.4	(a)	State and explain factors affecting biodegradable polymers.	**07**
	(b)	Write short note on polysaccharides.	**07**
		OR	
Q. 4	(a)	Explain biological degradation mechanism of polymers.	**07**
	(b)	Write any four polymer blends and state applications of it.	**07**
Q.5	(a)	Write properties and applications of Poly Lactic Acid (PLA).	**07**
	(b)	State various processing methods of biodegradable polymers and explain any one.	**07**
		OR	
Q.5	(a)	Explain the impact of biodegradable polymers on environment.	**07**
	(b)	State and explain various additives use for biodegradable polymers.	**07**

****